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Title of invention: DETERGENT COMPOSITION
Abstract:

PROBLEM TO BE SOLVED: To provide a detergent composition being lowly skin-irritating, having excellent foamability, facilitating to comb the hair smoothly with fingers in rinsing after washing and giving comfortable humectant feel to the hair or skin after washing and drying.

SOLUTION: This composition comprises an N-long-chain acyl dipeptide (salt) (A) of formulas I and/or II having a dipeptide structure comprisin an acid amino acid and a neutral amino acid and an N-long-chain acyl acid amino acid (salt) of formula III and an N-long-chain acyl neutral amino acid (salt) (B) of formulas IV in an A/B weight ratio of 0.05/100-2 Formula I: R^1- CO-(X-Y)-O 1/nM^{1n+}, Formula II: R^2-CO-(Y-X-)-O 1/nM^{2n+} (R^1 a R^2 are independently 7-21C linear or branched alkyls or alkenyls; X is an acid amino acid residue; Y is a neutral amino acid residue; M^1 and M^2 are independently hydrogen, alkali metals, alkaline earth metals, organic amines, basic amino acids or ammonium; when M^1 and M^2 are monovalent ions, n=1, and they are divalent ions, n=2). Formula III: R^3-CO-X-O 1/nM^{3n+}, Formula IV: R^4CO-Y-O 1/nM^{4n+} (R^3 and R^4 are each a group similar to R^1 or R^2; X and Y are as defined above; and M^3, M^4 and n are the same as M^1, M^2 and n, respectively).
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Other Drawings...

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(57)
[ABSTRACT]
(Amended)
[PROBLEM TO BE SOLVED]
There is a little skin stimulus, and be superior to foaming, and finger line in rinsing of hair cleaning is preferable, and superior cleaner composition is provided in a feeling of moisture retention after desiccation in a hair / skin cleaning.
[SOLUTION]
Cleaner composition to contain in ratio of N- long chain acyl neutral amino acid (with salt) (B) A/B =0.05/100-20/100 of N- long chain acyl acidic amino acid (salt) of N- long chain acyl dipeptide (with salt) (A) general formula 3 of nitramine 1 having dipeptide configuration comprising acidic amino acid and neutral amino acid and 2 and general formula 4. R^1 -CO- (X-Y) -O1/nM^{1n+} (1) R^2 -CO- (Y-X) -O1/nM^{2n+} (2) (R^1 and R^2 are independent, and stand-alone, they are n =2s at the time of n =1, 2 values ion at the time of 1 value ion hydrogen, alkali metal, alkaline earth metal, organic amine, basic amino acid or ammonium, M^1 and M^2 neutrality amino acid residue, M^1 and M^2 acidic property amino acid residue, Y alkyl group of normal chain of C7 to 21 or branch connection chain or alkenyl group, X.) R^3 -CO-X-O1/nM^{3n+} (3) R^4 -CO-Y-O1/nM^{4n+} (4) (as for R^3, R4, R^1, group same as R^2, X, Y are the same as the above, and M^3, M^4, n are similar to M^1, M^2, n.)

[WHAT IS CLAIMED IS]

[Claim 1]
The following nitramine (1) and (2) expressed N- long chain acyl dipeptide or the salt (A)
[CHEMICAL FORMULA 1]

$$R^1-CO-(X-Y)-O\ 1/n\ M^{1n+} \qquad (1)$$

$$R^2-CO-(Y-X)-O\ 1/n\ M^{2n+} \qquad (2)$$

(R^1 out of equation and R^2 is independent respectively, and alkyl group of normal chain of number of carbon atom 7-21 or branch chain or alkenyl group is shown, X shows acidic property amino acid residue, Y shows neutrality amino acid residue, they are n =1s at the time of 1 value ion, and M^1 and stand-alone respectively, M^2 shows hydrogen, alkali metal, alkaline earth metal, organic amine, basic amino acid or ammonium and M^1 and M^2 are n =2s at the time of 2 values ion.) The following nitramine (3) and (4) the N- long chain acyl acidic amino acid which is expressed respectively or the salt and N- long chain acyl neutral amino acid or the salt (B),
[CHEMICAL FORMULA 2]

$$R^3-CO-X-O\ 1/n\ M^{3n-} \qquad (3)$$

$$R^4-CO-Y-O\ 1/n\ M^{4n-} \qquad (4)$$

(R^3 out of equation and R^4 is independent respectively, and alkyl group of normal chain of number of carbon atom 7-21 or branch chain or alkenyl group is shown, X shows acidic property amino acid residue the same as the above, Y shows neutrality amino acid residue the same as the above, they are n =1s at the time of 1 value ion, and M^3 and stand-alone respectively, M^4 expresses hydrogen, alkali metal, alkaline earth metal, organic amine, basic amino acid or ammonium and M^3 and M^4 is n =2 at

the time of 2 values ion.) Detergent composition including containing at the rate of / (B) =0.05/100-20/100 with a weight ratio (A).
[Claim 2]
Detergent composition; according to claim 1 wherein; Acidic amino acid is glutamic acid preparation or asparagic acid.
[Claim 3]
Claim 1 or detergent composition as claimed in 2; wherein; Neutral amino acid is para-hydroxyanilinoacetic acid, alanine, beta - alanine, n-acyl sarcosine, N- carbinyl - beta - alanine, valine, leucine, isoleucine, serine, threonine or phenyl-alanine.
[Claim 4]
Claim 1 or detergent composition as claimed in 2; wherein; Neutral amino acid is para-hydroxyanilinoacetic acid, alanine, valine, leucine, isoleucine or threonine.

[DETAILED DESCRIPTION OF THE INVENTION]

[0001]

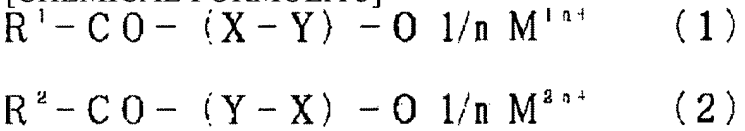
[TECHNICAL FIELD OF THE INVENTION]
The present invention relates to detergent composition, cleaner composition superior according to the finger in rinsing of case of hair cleaning in a feeling of skin after desiccation and moisture retention of a hair.
[0002]

[PRIOR ART]
That stimuli is low as for the shampoo, the cleansing foam, detergent for kitchens skin and much cleaner of an opportunity touching a hair is regarded as important. By way of example only, A hair and stimulatory to skin are high in polyoxyethylene alkyl ether sulfate and alkyl benzene sulfonate overused with detergent, and, in addition, a creak feeling of a hair in rinsing, a feeling of application such as a feeling of skin *notsuppari* after application are not satisfactory things.
[0003]
The N- long chain acyl peptide that acylation did the peptide which N- long chain acyl glutamic acid, N-acylamino acid such as N- long chain acyl alanine and natural protein are hydrolyzed for the detergent that skin and action as opposed to a hair are *onwa* conventionally, and is provided in higher fatty acid is known.
[0004]
N- long chain acyl neutral amino acid such as N- long chain acyl alanine comprises superior foam ability with alkaline property from intersex , in the case of rinsing at the time of shampoo, it creaks, and there are a few feelings, and crystal precipitates in slightly acidic domain although finger line is good, and fluid is hard to be kept, and foaming is remarkable, and it falls.
[0005]
On the other hand, N- long chain acyl acidic amino acid such as N- long chain acyl glutamic acid preparation can be superior to **joyasuteisei* in slightly acidic territory and can be superior to a feeling of moisture retention after skin and cleaning desiccation for a hair. However, Foaming and blister soundness were not enough, and there was issue in a creak feeling of case of rinsing in shampoo and a feeling of application according to the finger again.
[0006]
In addition, In N- long chain acyl hydrolysis peptide, there is characteristic odor, the shortcoming which turbidity appears when it is combined with liquid cleaner is comprised, a feeling of application is not a satisfactory thing, too.
[0007]

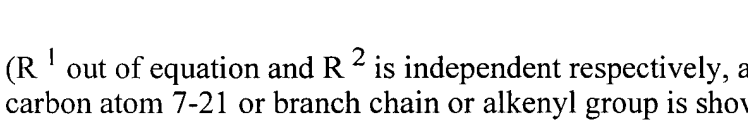
In late years, While ability pursued in detergent composition diversifies , as well as low acrid, more superior cleaner of a feeling of application such as foaming, a feeling of moisture retention, a feeling of rinsing is regarded as important very, it depends, and development of value-added high cleaner composition is requested.
[0008]

[PROBLEM TO BE SOLVED BY THE INVENTION]
There is a little stimulus as opposed to skin, and be superior to foaming, and, in a prior-art background bottom as claimed in a foregoing paragraph, the present invention is directed to that the cleaner composition which can be more superior to a feeling of skin after cleaning desiccation and moisture retention of a hair according to the finger in rinsing of case of hair cleaning is provided.
[0009]

[MEANS TO SOLVE THE PROBLEM]
Scholars of present invention should achieve purpose as claimed in the above, and cleaner composition containing N- long chain acyl dipeptide (salt) (B) having dipeptide configuration comprising acidic amino acid and neutral amino acid and N- long chain acyl acidic amino acid (salt) and N- long chain acyl neutral amino acid (salt) in particular ratio finds that it is in superior cleaner composition comprising characteristic as claimed in a foregoing paragraph as a result of investigation (A) zealously, such a finding was based on, and the present invention was finished.
[0010]
In other words, Nitramine (1) the following the present invention and (2) expressed N- long chain acyl dipeptide or the salt (A)
[CHEMICAL FORMULA 3]

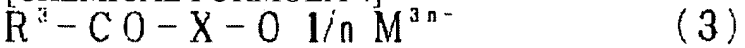


(1)



(2)

(R^1 out of equation and R^2 is independent respectively, and alkyl group of normal chain of number of carbon atom 7-21 or branch chain or alkenyl group is shown, X shows acidic property amino acid residue, Y shows neutrality amino acid residue, they are n =1s at the time of 1 value ion, and M^1 and stand-alone respectively, M^2 shows hydrogen, alkali metal, alkaline earth metal, organic amine, basic amino acid or ammonium and M^1 and M^2 are n =2s at the time of 2 values ion.) The following nitramine (3) and (4) the N- long chain acyl acidic amino acid which is expressed respectively or the salt and N- long chain acyl neutral amino acid or the salt (B),
[CHEMICAL FORMULA 4]



(3)

(4)

(R^3 out of equation and R^4 is independent respectively, and alkyl group of normal chain of number of carbon atom 7-21 or branch chain or alkenyl group is shown, X shows acidic property amino acid residue the same as the above, Y shows neutrality amino acid residue the same as the above, they are n =1s at the time of 1 value ion, and M^3 and stand-alone respectively, M^4 expresses hydrogen, alkali metal, alkaline earth metal, organic amine, basic amino acid or ammonium and M^3 and M^4 is n =2 at the time of 2 values ion.) Detergent composition including containing at the rate of / (B) =0.05/100-20/100 with a weight ratio (A).
[0011]

[MODE FOR CARRYING OUT THE INVENTION]
As follows, The present invention is explained in detail.
[0012]
Or (2) N- long chain acyl dipeptide having dipeptide configuration comprising acidic amino acid concerning the present invention and neutral amino acid or the salt can express follows general formula (1).
[0013]

[CHEMICAL FORMULA 5]

$$R^1-CO-(X-Y)-O\ 1/n\ M^{n+} \quad (1)$$

$$R^2-CO-(Y-X)-O\ 1/n\ M^{n+} \quad (2)$$

[0014]
In equation, R^1 and R^2 is independent respectively, and alkyl group of normal chain of number of carbon atom 7-21 or branch chain or alkenyl group is shown, X shows acidic property amino acid residue, Y shows neutrality amino acid residue, they are n =1s at the time of 1 value ion, and M^1 and stand-alone respectively, M^2 expresses hydrogen, alkali metal, alkaline earth metal, organic amine, basic amino acid or ammonium and M^1 and M^2 is n =2 at the time of 2 values ion.
[0015]
In addition, And (4) N- long chain acyl acidic amino acid or the salt and N- long chain acyl neutral amino acid or the salt can express each, follows general formula (3).
[0016]

[CHEMICAL FORMULA 6]

$$R^3-CO-X-O\ 1/n\ M^{n+} \quad (3)$$

$$R^4-CO-Y-O\ 1/n\ M^{n+} \quad (4)$$

[0017]
In equation, R^3 and R^4 is independent respectively, and alkyl group of normal chain of number of carbon atom 7-21 or branch chain or alkenyl group is shown, X shows acidic property amino acid residue the same as the above, Y shows neutrality amino acid residue the same as the above, they are n =1s at the time of 1 value ion, and M^3 and stand-alone respectively, M^4 expresses hydrogen, alkali metal, alkaline earth metal, organic amine, basic amino acid or ammonium and M^3 and M^4 is n =2 at the time of 2 values ion.
[0018]
X of N- long chain acyl acidic amino acid (salt) expressed in the nitramine (1) to use or (2) expressed N- long chain acyl dipeptide (salt) and general formula (3) by detergent composition of the present invention shows acidic property amino acid residue, but, glutamic acid, asparagic acid can be given for acidic amino acid giving such a residue. In addition, As for such N- long chain acyl dipeptide (salt) and the N- long chain acyl acidic amino acid (salt), either of racemic body and optically active substance is preferable.
[0019]
In addition, Y of N- long chain acyl neutral amino acid (salt) expressed in the nitramine (1) to use or (2)

expressed N- long chain acyl dipeptide (salt) and general formula (4) by detergent composition of the present invention shows neutrality amino acid residue, but, glycin, alanine, beta - alanine, n-acyl sarcosine, N- carbinyl - beta - alanine, gamma - aminobutyric acid, epsilon - aminocaproic acid, valine, leucine, isoleucine, serine, threonine, cystine, cysteine, methionine, phenyl-alanine, tyrosine, triptophan, proline and hydroxyproline can be given for neutral amino acid giving such a residue, but, preferably it is glycin, alanine, beta - alanine, n-acyl sarcosine, N- carbinyl - beta - alanine, valine, leucine, isoleucine, serine, threonine and phenyl-alanine and a particularly preferred thing is glycin, alanine, valine, leucine, isoleucine and threonine. As for such N- long chain acyl dipeptide (salt) and the N- long chain acyl neutral amino acid (salt), either of racemic body and optically active substance is preferable.
[0020]
Stand-alone respectively, R^4 of N- long chain acyl neutral amino acid salt expressed in the nitramine (1) or (2) R^1 of expressed N- long chain acyl dipeptide salt and R^2, R^3 of N- long chain acyl acidic amino acid (salt) expressed in the general formula (3) and the general formula (4) shows alkyl group of normal chain of number of carbon atom 7-21 or branch chain or alkenyl group, but , for example, long chain acyl residue R^1 CO- including these alkyl group or alkenyl group, R^2 CO-, R^3 CO- and R^4 CO- can be introduced than aliphatic acid of number of carbon atom 8-22 such as lauric acid, myristic acid, palmitic acid, stearic acid, arachic acid, coconut oil fatty acid, hardening beef tallow aliphatic acid, behenic acid, iso stearic acid, oleic acid, castor oil aliphatic acid, olive oil aliphatic acid, palm oil aliphatic acid and blending aliphatic acid including these.
[0021]
Stand-alone respectively, as base constituent of M^4 of N- long chain acyl neutral amino acid salt expressed in the nitramine (1) or (2) M^1 of expressed N- long chain acyl dipeptide salt and M^2, M^3 of N- long chain acyl acidic amino acid salt expressed in the general formula (3) and the general formula (4), it is sodium, alkali metal such as potassium; Magnesium, an alkali earth metal such as calcium; Monoethanolamine, diethanolamine, triethanolamine, two - amino -2 - carbinyl -1 - propanol, two 1,3- - amino -2 - carbinyl - propanediol, organic amine such as tetrakis (two - hydroxy isopropyl) diaminoethane; Lysin, ornithine, basic amino acid such as arginine; In addition, *ha* ammonium can be given. In addition, Compound of nitramine (1)-(3) originally comprises two carboxyl group, one can form superscription M^1, M^2, salt with M^3 soon, but, other nothing may form salt with the base constituent, of course. Two kinds of base component may be the above-mentioned combination.
[0022]
For the nitramine (1) or (2) expressed N- long chain acyl dipeptide, N- long chain acyl glutamyl glycin, N- long chain acyl glycyl glutamic acid, N- long chain acyl glutamyl alanine, N- long chain acyl alanyl glutamic acid, N- long chain acyl glutamyl threonine, N- long chain acyl threonyl glutamic acid, N- long chain acyl glutamyl valine, N- long chain acyl valyl glutamic acid, N- long chain acyl glutamyl leucine, N- long chain acyl leucyl glutamic acid, N- long chain acyl glutamyl isoleucine, N- long chain acyl iso leucyl glutamic acid, N- long chain ashiruasuparachirugurishin, N- long chain acyl glycyl asparagic acid, N- long chain ashiruasuparachiruaranin, N- long chain acyl alanyl asparagic acid, N- long chain ashiruasuparachirusureonin, N- long chain acyl threonyl asparagic acid, N- long chain ashiruasuparachirubarin, N- long chain acyl valyl reed para Gin acid, N- long chain ashiruasuparachiruroishin, N- long chain acyl leucyl asparagic acid, N- long chain ashiruasuparachiruisoroishin, N- long chain acyl iso leucyl asparagic acid can be given as the thing which preferred, is used. As for the peptide bond going through carboxyl group of acidic amino acid, even a thing going through both carboxyl group is preferable, and in other words even a thing going through which of alpha and beta carboxyl group in asparagic acid is preferable, and even a thing going through which of alpha and gamma carboxyl group in glutamic acid again is preferable. In addition, These N- long chain acyl dipeptide is preferable in all of racemic body and optically active substance.
[0023]
Nitramine, (1) Or (2) after, for example, the expressed N- long chain acyl dipeptide or the salt produced dipeptide comprising acidic amino acid and neutral amino acid, it can be produced by the method that

acylation does by aliphatic acid halide in alkali aqueous solution easily. For production method of dipeptide, normal method in peptide chemistry can be depended on. In addition, After having converted method to remove the rear carboxyl protecting group which condensed by means of condensing agent such as DCC selectively, N- long chain acylamino acid to acid halide by halogenating agent such as acid chloride, it can be produced by method to make do amino acid and condensation reaction easily. Combination about optically active substance of acidic amino acid in dipeptide and neutral amino acid, even which of L body and L body, L body and D body, D body and L body and D body and D body, a preferable thing, of course.

[0024]

Nitramine, (3) Method to use *syotten* bow man (Schotten Baumann) reaction making condense in alkali aqueous solution is generic, and, for example, method as claimed in Japanese Patent Publication No. 46-8685, Japanese Patent Publication No. 48-35058 and Japanese Patent Publication No. 51-38681 is followed, and N- long chain acyl neutral amino acid (salt) expressed in N- long chain acyl acidic amino acid (salt) which it appears, and is expressed and nitramine (4) can be produced. The amino acid which should assume acyl, even which of L body, D body and racemic body, a preferable thing, of course.

[0025]

It is characterized by that detergent composition of the present invention classifies roughly, and two kinds of spirit (A and B) is contained at the rate of specify.

[0026]

Spirit *no* (component A) is N- long chain acyl apparition of dipeptide becoming acidic amino acid from neutral amino acid or the salt namely general formula (1) or (2) expressed N- long chain acyl dipeptide and higher than of the, salting one kind. In other words, It is one kind of above chosen from the whole of N- long chain acyl dipeptide expressed in general formula (2) by N- long chain acyl dipeptide expressed in nitramine (1) for component A and the salt range and the salt. Thus, It can be chosen both of chemical agent expressed in chemical agent expressed in only from a house of chemical agent expressed in general formula (2) only by a house of compound expressed in nitramine (1) and general formula (1) and general formula (2) component A.

[0027]

Other than spirit (heterophasic olefin polymer composition), as for this, it is from N- long chain acyl acidic amino acid and one kind of above chosen more than one kind by N- long chain acyl neutral amino acid and the salt (the expressed N- long chain acyl neutral amino acid which in other words is four nitramine () and the salt) chosen by the salt (the expressed N- long chain acyl acidic amino acid which in other words is three nitramine () and the salt) in N- long chain acylamino acid (salt).

[0028]

Proportion is / (B) =0.05/100-20/100 with a weight ratio (A), and preferably N- long chain acyl dipeptide (with salt) (component A) N- long chain acylamino acid (salt) (heterophasic olefin polymer composition) in detergent composition of the present invention is 0.1/100-10/100. A feeling of application falls without a feeling of enough application being provided in that case of less than 0.05/100 when on the other hand, 20/100 are gone over and becomes by cost considerations disadvantageous.

[0029]

Among heterophasic olefin polymer composition, rate for N- long chain acyl neutral amino acid (salt) expressed in nitramine (4) of N- long chain acyl acidic amino acid (salt) expressed in nitramine (3) is usually (3) / (4) =5/95-95/5 with a weight ratio, but, when it is used in slightly acidic domain, when **joyasuteisei* is raised, rate of N- long chain acyl acidic amino acid (salt) had better be massive, and preferably it is 60/40-95/5. For the case less than case more than 95/5 or 5/95, fall of a feeling of application is caused.

[0030]

Nitramine, (3) To some extent the cleaner composition which N- long chain acyl neutral amino acid (salt) expressed in N- long chain acyl acidic amino acid (salt) and nitramine (4) which it appears, and is expressed is used together, and was combined supplements shortcoming to produce in the case of

application alone of each. By way of example only, Foaming in slightly acidic territory is improved by moderate combination of N- long chain acyl acidic amino acid (salt) and N- long chain acyl neutral amino acid (salt) (cf. gokeidai table 3). However, Furthermore, a feeling of moisture retention is massive, and it improves according to the creak feeling in rinsing, the finger by adding N- long chain acyl dipeptide (salt) expressed in N- long chain acyl dipeptide (salt) expressed in nitramine (1) or / and general formula (2), it can be done with very superior cleaner composition in conditioning effect. In addition, These N- long chain acyl dipeptide (salt) shows the conditioning effect which even very a little addition is enough for in comparison with other component.

[0031]

Content of grand total is more than one conventional % by weight, and preferably N- long chain dipeptide (salt) (component A) in detergent of the present invention and N- long chain acylamino acid (salt) (heterophasic olefin polymer composition) are 3-80 % by weight. When content of grand total is less than 1%, a feeling of satisfactory application is not provided at the time of application.

[0032]

It can make detergent composition of the present invention contain other surface-tension modifier by the range that does not obstruct advantage offered by the invention. If such a surface-tension modifier does not have special limit, and it is usually surface active agent used in cleaner composition, it dopes or higher than it is isolated or above two kinds are put together, and cleaner composition of the present invention can use together. As example of such a surface-tension modifier, it is high-quality fatty acid salt, polio Kishi alkyl ether sulfate, N- acylamino carboxylate, polyoxyethylene alkyl ether carboxylate, N- acyl taurine salt, negative ion pattern surface active agent such as sulfo amber acid system surface active agent; Alkyl dimethylamino acetic acid betaine, high-quality oil fatty amide propyl dimethylamino acetic acid betaine, amphoteric ion type surface active agent such as imidazoline type surface active agent; Alkyl saccharide system surface-tension modifier, polyoxyethylene alkyl ether system surface-tension modifier, higher fatty acid Al car nor amide, non-ion pattern surface active agent such as amine oxide; Benzalkonium chloride, chlorination alkyltrimethylammonium, chlorination dialkyl dimethylammonium, cation pattern surface active agent such as N- acyl arginine lower alkyl ester pyrrolidone carboxylate; Equal *o* can be given. In addition, N- acyl acidic amino acid (salt) except required component (heterophasic olefin polymer composition) of detergent composition of the present invention and N- acyl neutral amino acid (salt) can be combined in the field which does not interfere appropriately.

[0033]

The ethylene glycol which is usually used in detergent composition of the present invention again, propylene glycol, 1,3- butylene glycol, glycerin, moisturizing agent such as sorbitol; guriserinmonosuteareto, emulsifying agent such as *poriokishiechirensorubitanmonoraureto*; Adepsine oil, paraffin jelly, carbon hydride such as squalane; Isopropyl myristate, ester such as myristic acid octyl dodecyl; Hydroxyethyl cellulose, hydroxypropylcellulose, cellulosic such as carboxymetyl-cellulose; Anionic polymer such as acryl acid system polymer; Various silicone gel socket insert derivative; Cationic polymer such as cationization guar gum; Antiseptics such as para pen derivative; Foam increasing agent such as lauryl dimethylamine oxide; Aromatic; Coloring matter; Viscosity modifier; It is agent pearl; Oxidation inhibitor; Disinfectant; Antiinflammatory agent; UV absorber; PH moderator; Drug such as herbal medicine; Equal *o* can be combined appropriately.

[0034]

The pharmaceutical form that effect is the highest as detergent of detergent composition of the present invention is liquid, a letter of paste, a letter of gel, but, even if it is done in a letter of solid and pulverulent, function is shown enough. There is not special limit, and conventionally well-known method can be followed appropriately to prepare detergent composition of the present invention in these pharmaceutical form.

[0035]

For field of application of detergent composition of the present invention, purposes of use such as cleaner for kitchens, shampoo, body shampoo, cleansing foam, cleaning business cleaner are accepted,

and it can be used in various field of application, but, it is particularly suitable for shampoo, body shampoo, cleansing foam.
[0036]

[EXAMPLE]
As follows, The present invention is explained by embodiment more in detail. But, The present invention is not a thing limited to embodiment shown in the following.
[0037]
In addition, The following embodiment and the evaluation test in a comparative example were done as follows.
[0038]
(a) Appraisal of foaming: Total concentration 0.5 of surface-tension modifier prepared in % by weight and the aqueous solution which adjusted pH to 5.9 with citric acid in distilled water. The 50g are adopted, it is spatulated by mixer (a product made in Iwatani & Co., Ltd.) for families of 350ml *yo* for five seconds, foam volume was evaluated by standard shown in follows table 1 by measuring cubic content (ml) of blister after settling one minute.
[0039]

[TABLE 1]

第１表

◎：２５０ｍｌ以上
○：２００ｍｌ以上２５０ｍｌ未満
△：１５０ｍｌ以上２００ｍｌ未満
×：１５０ｍｌ未満

[0040]
(b) Appraisal of a feeling of application: About 20 total concentration of surface-tension modifier prepares aqueous solution of % by weight in distilled water, hair cleaning and function evaluation in a bathroom were done by a panelist of for each 10 people man and woman. Standard shown in follows table 2 was based on, and, according to the finger in rinsing in shampoo try-out, a feeling of moisture retention after desiccation (hair) and a feeling of moisture retention after desiccation in bathroom examination (hand) were evaluated. The result depended on average value of 20 panelists.
[0041]

[TABLE 2]

第２表

＜すすぎ時の指通り＞

２点：大変良い	◎
１点：良い	○
０点：普通	△
－１点：悪い	×

＜乾燥後の保湿感(髪)、乾燥後の保湿感(手)＞

２点：大変良い	◎
１点：良い	○
０点：普通	△
－１点：悪い	×

[0042]
Example 1 to 2 and comparative example 1-4:00 Detergent stock solution was made in composition of the following table 3 classes. Numerical value out of table expresses % by weight, a residual quantity assumes tota massa 100 % by weight by purified water, and callosity is shown. From these stock solution, the (a) foaming appraisal service water solution was prepared, and foaming was evaluated. Result is shown in the table.
[0043]

[TABLE 3]

第３表

配合成分	比較例				実施例	
	1	2	3	4	1	2
ﾆｺｲﾙｸﾞﾙﾀﾐﾝ酸TEA(*1)	20.0		18.0	15.0	18.0	15.0
ﾆｺｲﾙｸﾞﾘｼﾝTEA		20.0	2.0	5.0	2.0	5.0
ﾆｺｲﾙｸﾞﾙﾀﾐﾙｸﾞﾘｼﾝTEA					0.01	0.01
ﾆｺｲﾙｸﾞﾘｼﾙｸﾞﾙﾀﾐﾝ酸TEA					0.01	0.01
精製水	残量	残量	残量	残量	残量	残量
泡立ち(ｐＨ５．９)	△	×	○	◎	○	◎

*1：TEAはトリエタノールアミンを意味する。

[0044]
From result shown in a memorial presented to the Throne, it is found that foaming in slightly acidic domain is improved in comparative example composition by doing compounding ratio with N- long chain acyl acidic amino acid (salt) and N- long chain acyl neutral amino acid (salt) with suitable rate.
[0045]
Example 3 to 7 and comparative example 5-10:00 In composition of the following table 4 classes, detergent test liquid (total concentration of surface-tension modifier seems to be the above about 20 % by weight.) Numerical value out of table expresses % by weight) a residual quantity assumes tota massa

100 % by weight by purified water, and to show callosity in (the same in table 5) is made, a feeling of application on article of seed shown in the table was checked. Result is shown in the table.
[0046]

[TABLE 4]

第４表

配合成分	比較例						実施例				
	5	6	7	8	9	10	3	4	5	6	7
ココイルグルタミン酸 TEA	20.0		18.0	18.0	18.0	15.0	18.0	18.0	15.0	15.0	
ココイルアスパラギン酸 Na											18.0
ココイルグリシン TEA		20.0	2.0	2.0	2.0	5.0	2.0	2.0	5.0	5.0	2.0
ココイルグルタミルグリシン TEA					0.005		0.01	0.05	0.01	0.05	
ココイルグリシルグルタミン酸 TEA							0.01	0.05	0.01	0.05	
ココイルアスパチルグリシン Na											0.1
ココイルグリシルグリシン TEA				0.1							
精製水	残量	残量	残量	残量	残量	残量	残量	残量	残量	残量	残量
乾燥後の保湿感（手）	○	△	○	○	○	○	○	◎	◎	◎	◎
乾燥後の保湿感（髪）	○	△	○	○	○	△	◎	◎	○	◎	◎
すすぎ時の指通り	×	○	△	△	△	△	○	◎	○	◎	◎

[0047]
From result shown in a memorial presented to the Throne, detergent composition (embodiment) of the present invention is compared with a comparative example about a feeling of moisture retention after desiccation (hand and hair) and article of which according to a finger in rinsing and can be superior to a feeling of application. This situation is understood.
[0048]
Embodiment 8-11 and comparative example 11-14:00 Detergent test liquid is made in composition of the following table 5 classes, a feeling of application on article of seed shown in the table was checked. Result is shown in the table.
[0049]

[TABLE 5]

第５表

配合成分	比較例				実施例			
	１１	１２	１３	１４	８	９	１０	１１
ココイルグルタミン酸 TEA	18.0	18.0	18.0		18.0	18.0	18.0	
ココイルアスパラギン酸 Na				18.0				18.0
ココイルアラニン TEA	2.0			2.0	2.0			2.0
ココイルスレオニン TEA		2.0				2.0		
ラウロイルバリン TEA			2.0				2.0	
ココイルグルタミルアラニン TEA					0.1			
ココイルグルタミルスレオニン TEA						0.1		
ココイルグルタミルバリン TEA							0.1	
ココイルアスパチルアラニン TEA								0.1
精製水	残量	残量	残量	残量	残量	残量	残量	残量
乾燥後の保湿感（手）	○	○	○	○	◎	◎	◎	◎
乾燥後の保湿感（髪）	○	○	○	○	◎	◎	◎	◎
すすぎ時の指通り	△	△	△	△	◎	◎	◎	◎

[0050]
From result shown in a memorial presented to the Throne, detergent composition (embodiment) of the present invention is compared with a comparative example about a feeling of moisture retention after desiccation (hand and hair) and article of which according to a finger in rinsing and can be superior to a feeling of application. This situation is understood.
[0051]
Hair shampoo was produced experimentally in composition shown in two (hair shampoo) example 1 follows table 6s.
[0052]

[TABLE 6]

第6表

組　成	配合量(%)
ココイルグルタミルグリシントリエタノールアミン	2
ラウロイルグルタミン酸トリエタノールアミン	5
ラウロイルグリシントリエタノールアミン	5
ラウロイルーN－メチルーβ－アラニントリエタノールアミン	5
ラウリルジメチルアミノ－2－ヒドロキシプロピルスルホベタイン	5
ラウリン酸ジエタノールアミド	4
POE(60)ポリミリスチレン(1)牛脂アルキルエーテル(*1)	2．5
セチルトリメチルアンモニウムクロリド	0．4
エチルココイルアルギネートPCA(*2)	0．5
ジステアリン酸ポリエチレングリコール	2
マンニトール	10
塩化ナトリウム	2
エタノール	3
グリセリン	5
クエン酸ナトリウム	0．2
安息香酸ナトリウム	0．2
トリクロサン	0．2
香料	0．1
水	残部
合　計	100

*1：POEはポリオキシエチレンを意味する。 *2：PCAはピロリドンカルボン酸を意味する。

[0053]
The hair shampoo was superior according to the foaming, feeling of moisture retention and the finger in rinsing of hair after desiccation.
[0054]
Hair shampoo was produced experimentally in composition shown in three (hair shampoo) example 1 follows table 7s.
[0055]

[TABLE 7]

第7表

組　成	配合量(%)
ラウロイルグルタミルグリシンナトリウム	0．5
ラウロイルグルタミン酸トリエタノールアミン	5
ラウロイルグリシントリエタノールアミン	1
ココイルイセチオン酸トリエタノールアミン	4
2-ラウリル-N-カルボキシメチル-N-ヒドロキシエチルイミダゾリウムベタイン	3
ポリオキシエチレンラウリルエーテル硫酸ナトリウム	4
アルキルポリグリコシド(*)	2
ラウリルジメチルベンジルアンモニウムクロリド	0．4
1,3-ブチレングリコール	3
グリチルリチン酸ジカリウム	0．2
加水分解コラーゲン	0．5
ジステアリン酸ポリエチレングリコール	2
ヒドロキシプロピルセルロース	2
ピロリドンカルボン酸ナトリウム(50%水溶液)	5
トリクロロカルバニリド	0．2
香料	0．1
水	残部
合　計	100

＊：一般式$R^5(OR^6)_aG_b$において、R^5は炭素原子数12のアルキル基、Gはグルコース、aは0、そしてbは1．4のもの。

[0056]
The hair shampoo is superior same as a thing in example 1 2.
[0057]
Hair shampoo was produced experimentally in composition shown in four (hair shampoo) example 1 follows table 8s.
[0058]

[TABLE 8]

第8表

組　成	配合量(%)
ココイルアスパラチルアラニントリエタノールアミン	0．1
ココイルアスパラギン酸トリエタノールアミン	5
ミリストイルアラニントリエタノールアミン	5
ラウリル硫酸トリエタノールアミン	2
アルファオレフィンスルホン酸トリエタノールアミン	2
ラウリルイミダゾリウムベタイン	5
ポリオキシエチレンスルホコハク酸ラウリルニナトリウム	5
ラウリン酸ジエタノールアミド	4
カチオン化セルロース	0．4
POE(40)硬化ヒマシ油モノピログルタメート	2．5
加水分解コラーゲン	0．5
ジステアリン酸ポリエチレングリコール	2
「エルデュウCL-301」(*)	1
プロピレングリコール	3
イソフェニルメチルフェノール	0．2
香料	0．1
水	残部
合　計	100

*：味の素（株）製　ジ（コレステロール、ベヘニル、オクタデシルアルコール）N－ラウロイル－L－グルタミン酸エステル

[0059]
The hair shampoo is superior same as a thing in example 1 2.
[0060]
Hair shampoo was produced experimentally in composition shown in five (hair shampoo) example 1 follows table 9s.
[0061]

[TABLE 9]

第9表

組　成	配合量(%)
ココイルグルタミルバリンナトリウム	0．1
ココイルグルタミン酸カリウム	2
ココイルバリンカリウム	2
ラウリン酸カリウム	1
ラウリルジメチルアミンオキシド	1
ラウリルジメチル酢酸ベタイン	3
ラウリル酸アミドプロピルベタイン	3
ポリオキシエチレンエーテル酢酸ナトリウム	3
ラウロイルメチルタウリンカリウム	3
エチル硫酸ラノリン脂肪酸アミノプロピルエチルジメチルアンモニウム(67%水溶液)	0．5
ラウリン酸ジエタノールアミド	1
カチオン化セルロース	0．4
ポリ塩化ジメチルジアリルアンモニウムアクリルアミド(8%水溶液)	1
ステアリン酸アミドプロピルジメチルアミン	1
「マリンデュウPC-100」(*)(1%水溶液)	10
ジステアリン酸ポリエチレングリコール	2
グリシン	0．05
アルギニン	0．05
ヒドロキシプロリン	0．05
プロリン	0．05
グルタミン酸	0．05
スクワレン	0．5
ジブチルヒドロキシトルエン	0．2
香料	0．1
水	残部
合　計	100

＊：味の素（株）製　部分脱アセチル化キチン

[0062]
The hair shampoo is superior same as a thing in example 1 2.
[0063]
Hair shampoo was produced experimentally in composition shown in six example 1 follows table 10s.
[0064]

[TABLE 10]

第１０表

組　成	配合量(%)
ココイルグルタミルグリシントリエタノールアミン	0．1
ココイルグリシルグルタミン酸トリエタノールアミン	0．1
ラウロイルグルタミン酸トリエタノールアミン	10
ラウロイルグルタミン酸マグネシウム	2
ラウロイルグリシントリエタノールアミン	5
ラウロイルグルコシド(縮合度1.4)	4
ポリオキシプロピレン(11)ポリオキシエチレン(4)	
ブチルエーテル(HLB 7.2)	3
カルボキシビニルポリマー	3
グリシンベタイン	2
エタノール	4
防腐剤	0．2
香料	0．1
水	残部
合　計	100

[0065]
The hair shampoo is superior same as a thing in example 1 2.
[0066]
Hair shampoo was produced experimentally in composition shown in seven example 1 follows table 11s.
[0067]

[TABLE 11]

第１１表

組　成	配合量(%)
ココイルN-メチル-β-アラニルグルタミン酸カリウム	0．2
ラウロイルグルタミン酸カリウム	10
ラウロイルN-β-アラニンカリウム	10
POE(250)ペンタエリスリトール2-ヘプチルウンデカン酸エステル	2
ポリオキシプロピレン(7)ポリオキシエチレン(3)	
ブチルエーテル(HLB 5.4)	4
エタノール	4
防腐剤	0．2
香料	0．1
水	残部
合　計	100

[0068]
The hair shampoo is superior same as a thing in example 1 2.
[0069]
Hair shampoo was produced experimentally in composition shown in eight example 1 follows table 12s.

[0070]

[TABLE 12]

第１２表

組　成	配合量(%)
ココイルグルタミルグリシンアルギニン塩	2
ラウロイルグルタミン酸アルギニン塩	20
ラウロイルグリシンアルギニン塩	20
椰子油脂肪酸ジエタノールアミド	4
カチオン化セルロース	0．4
POE(60)ポリミリスチレン(1)牛脂アルキルエーテル	2．5
加水分解コラーゲン	0．5
ジステアリン酸ポリエチレングリコール	2
グリセリン	5
グリシン	2
防腐剤	0．2
香料	0．1
水	残部
合　計	100

[0071]
The hair shampoo is superior same as a thing in example 1 2.
[0072]
Hair shampoo was produced experimentally in composition shown in nine example 1 follows table 13s.
[0073]

[TABLE 13]

第１３表

組　成	配合量(%)
ココイルグルタミルグリシントリエタノールアミン	1
ラウロイルグルタミン酸トリエタノールアミン	5
ラウロイルアスパラギン酸トリエタノールアミン	2
ラウロイルグリシントリエタノールアミン	3
ラウロイルアラニントリエタノールアミン	3
ラウリルエーテル硫酸トリエタノールアミン	4
ポリ塩化ジメチルアリルアンモニウムアクリルアミド(8%水溶液)	4
ラウロイルジエタノールアミド	2
PCAソーダ(50%水溶液)	2
防腐剤	0．2
アラントイン	0．4
EDTA	0．2
水	残部
合　計	１００

[0074]
The hair shampoo is superior same as a thing in example 1 2.
[0075]
Body shampoo was produced experimentally in composition shown in 0 example 2 follows table 14s.
[0076]

[TABLE 14]

第１４表

組　成	配合量(%)
ココイルアスパラチルグリシンカリウム	0．5
ラウロイルアスパラギン酸カリウム	6
ココイルアラニントリエタノールアミン	3
ココイルグリシンカリウム	１０
ステアリン酸ナトリウム	1
ラウリン酸トリエタノールアミン	1
ココイルイセチオン酸	5
ラウリルジメチルアミンオキシド	2
ヒドロキシプロピルセルロース	1
香料	0．5
ジブチルヒドロキシトルエン	0．2
防腐剤	0．2
水	残部
合　計	１００

[0077]
The body shampoo is superior in foaming, a feeling of cutaneous moisture retention.
[0078]
Washing face charges were produced experimentally in composition shown in one example 2 follows table 15.
[0079]

[TABLE 15]

第１５表

組　成	配合量(%)
ミリストイルグルタミルグリシンカリウム	0．7
ココイルグルタミン酸カリウム	3
ミリストイルグリシンカリウム	3
ヤシ油脂肪酸カリウム	20
アルキルグルコシド	3
「エルデュウCL-301」(*)	1
クエン酸ナトリウム	0．2
アロエエキス	0．8
防腐剤	0．2
水	残部
合　計	100

＊：味の素（株）製　ジ（コレステロール、ベヘニル、オクチルドデカノール）
N－ラウロイル－L－グルタミン酸エステル

[0080]
The washing face charges are good in foaming, a feeling of cutaneous moisture retention.
[0081]
Washing face charges were produced experimentally in composition shown in two example 2 follows table 16s.
[0082]

[TABLE 16]

第１６表

組　成	配合量(%)
ラウロイルグルタミルグリシンナトリウム	0．1
ラウロイルグリシルグルタミン酸ナトリウム	2
ラウロイルグルタミン酸カリウム	10
ラウロイルグリシンカリウム	10
ステアリン酸ナトリウム	1
椰子油脂肪酸ジエタノールアミド	4
ジステアリン酸ポリエチレングリコール	2
ソルビトール	2
ヒドロキシメチルセルロース	0．8
PEG-120メチルグルコースジオレート(*)	0．5
プロピレングリコール	10
防腐剤	0．2
香料	0．1
水	残部
合　計	100

＊：ＰＥＧはポリエチレングリコールを意味する

[0083]

The washing face charges are good in foaming, a feeling of cutaneous moisture retention.
[0084]

[EFFECT OF THE INVENTION]
As for the detergent composition of the present invention, there was a little stimulus as opposed to skin, and was superior to foaming, and finger line in rinsing of case of hair cleaning was preferable and, in addition, was able to be superior to a feeling of moisture retention after desiccation in a hair and skin cleaning.